

CLAIMS

1. Impact device for a rock drill or the like, comprising means for delivering a stress pulse at a tool connected to the impact device, wherein the means for delivering a stress pulse comprise an impact element supported to a frame of the impact device and means for subjecting the impact element to stress and correspondingly for releasing the impact element suddenly from the stress, whereupon the stress energy stored in the element is discharged in the form of a stress pulse directed at the tool that is directly or indirectly connected to the impact element and that the means for subjecting the impact device to stress comprise a pressure fluid space, and a shoulder provided in the impact element and facing said pressure fluid space, and means for feeding hydraulic fluid to the pressure fluid space and for releasing pressure from the space.

2. An impact device according to claim 1, wherein the means for releasing pressure from the pressure fluid space comprise means for discharging pressurized hydraulic fluid from said pressure fluid space, the impact element being subjected to stress by feeding pressurized hydraulic fluid to said pressure fluid space and released from stress by allowing the hydraulic fluid to suddenly flow out of said pressure fluid space.

3. An impact device according to claim 2, wherein it comprises a booster piston in connection with said pressure fluid space, and means for transferring the booster piston towards the pressure fluid space so that the volume of the space decreases and the pressure in said space increases, and means for freeing the booster piston to move away from the pressure fluid space, so that the volume of the space increases and the pressure in said space correspondingly decreases.

4. An impact device according to claim 3, wherein the booster piston is pushed towards said pressure fluid space by a mechanical trigger element.

5 5. An impact device according to claim 4, wherein a separate bearing cylinder is provided between the trigger element and the booster piston, that the trigger element comprises a shoulder which faces the bearing cylinder and along which the cylinder rotates, and that after the trigger element has moved a sufficient distance, the bearing
10 cylinder and the booster piston are able to move rapidly away from said pressure fluid space so as to generate a stress pulse.

6. An impact device according to claim 1, wherein the impact element has at least two corresponding shoulders located one after another in the longitudinal direction of the element, and locking means for
15 locking a desired corresponding shoulder immovably in the axial direction of the impact device.

7. An impact device according to claim 1, wherein the impact
20 element is formed of at least two separate impact elements connected in series in the longitudinal direction to act on one another so that the stress length of the impact element is the combined stress length of the impact elements connected in series.

25 8. An impact device according to claim 7, wherein at least some of the impact elements are substantially sleeve-like and placed coaxially with respect to one another.